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ABSTRACT

In the interests of improving and ensuring the quality of teachers in the schools, testing is increasingly becoming an integral part of the certification process. Almost all states currently require that prospective teachers pass a test either as a requirement for entering a teacher education preparation program or after completing such a program to obtain a teaching certificate. The purpose of this paper is to discuss how several states have responded to the challenge of implementing a teacher certification testing program and preparing candidates for the test by providing a support system of materials for students and teacher education colleges. The paper will discuss activities for providing such a support system to prepare candidates and teacher educators for these certification testing programs, and will examine the strategies implemented by several states over the past decade. The paper will consider research and evaluation issues in determining the effectiveness of these support systems and will then discuss the results and implications of these strategies as they contribute to the improvement of teacher education and the preparation of quality teachers. (Author)

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Teacher Certification Testing Program Support Systems for Students and Colleges

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ABSTRACT

Teacher Certification Testing Program
Support Systems for Students and Colleges

In the interests of improving and ensuring the quality of teachers in the schools, testing is increasingly becoming an integral part of the certification process. Almost all states currently require that prospective teachers pass a test either as a requirement for entering a teacher education preparation program or after completing such a program to obtain a teaching certificate. The purpose of this paper is to discuss how several states have responded to the challenge of implementing a teacher certification testing program and preparing candidates for the test by providing a support system of materials for students and teacher education colleges. The paper will discuss activities for providing such a support system to prepare candidates and teacher educators for these certification testing programs, and will examine the strategies implemented by several states over the past decade. The paper will consider research and evaluation issues in determining the effectiveness of these support systems and will then discuss the results and implications of these strategies as they contribute to the improvement of teacher education and the preparation of quality teachers.

Teacher Certification Program Goals

Teacher certification testing is being adopted by an increasing number of states. Most teacher certification testing (TCT) programs have two primary goals. The first goal concerns the state's legitimate regulatory functions; the state board of education has a responsibility to protect the health, safety and welfare of students (U.S. Department of Health, Education and Welfare, 1977). The second goal is to use the teacher certification testing program to upgrade the overall quality of education by striving to provide better trained teachers, pupil personnel professionals, and administrators.

These two goals are highly interrelated and complementary. The state in implementing a teacher certification program, has the responsibility, and is afforded the opportunity, to design a program that attains both goals - regulation and educational improvement - through improvements in teacher preparation. In fact, certification programs can make a significant and direct contribution to the quality of instruction. In regulating education, the state is challenged with the responsibility of implementing the certification testing program in a uniform, fair, unbiased, and legally defensible manner while attempting to meet the need of providing quality teachers. For this reason, it is of the utmost importance that a pass/fail decision resulting from a test accurately reflect the professional content knowledge needed by teachers to practice successfully in their certification area.

However, the second goal, using the testing program as a vehicle for improving education, is taking on a greater emphasis as seen in the various, recent reports about the future of education in this country. For example, the Task Force on Teaching as a Profession, of the Carnegie Forum on Education and the Economy, states that the education system "will not succeed unless it not only raises but redefines the essential standards of excellence" (1986, p. 3). Similarly, this sentiment is echoed by the Holmes Group, which recently proposed several educational goals including making "the education of teachers educationally more solid" while creating standards "that are professionally relevant and intellectually defensible" (1986, p. 4).

Preparing Examinees

A central issue in teacher certification testing programs is that of providing adequate opportunity and training for prospective teacher candidates to allow them to pass certification tests. This includes providing teacher educators, who are charged with the responsibility of preparing teachers, with adequate resources, materials, and information to prepare candidates for these tests. Though these tests are typically not the only criteria for certification, they represent a major hurdle for certification candidates. In response to this need, states involved in teacher certification testing have shown an increasing interest in helping prospective teachers prepare for the test, to have a sense of the content covered by the test, to understand how to take the test, to understand the test results, and to make this information readily available to all candidates. By doing so, the state can maximize the benefits of the

program while exercising the necessary regulatory functions. The teacher certification testing programs can more broadly advance education by:

1) providing both administrative and subject matter information about the program;

2) identifying strengths and weaknesses for candidates in order to help them focus their studies; and

3) providing teacher education institutions with practical information about their students and their programs through diagnostic and prescriptive score reporting.

The information generated from the testing program can be used by teacher educators in preparing prospective teachers and can potentially lead to the preparation of more qualified individuals. Sound testing instruments alone are important, but testing programs may also incorporate a broader range of activities by providing a support system for both teacher education institutions and individual examinees. Lester Solomon, Director of Teacher Assessment for the Georgia Teacher Certification Testing program, has suggested that the high success rate of teacher candidates passing the tests over time has been greatly affected by the extensive support system provided by the state (1986). Support systems can include provisions to assist in the preparation of prospective teachers to take the tests as well as for preparation of teacher educators to utilize the results of the tests in their programs. The way in which the materials and other preparatory activities provided in conjunction with teacher certification programs are assumed to affect the educational process is a dynamic one; the results of testing can be used to improve education which in turn produces more qualified teachers whose results can be used to make further program revisions, and so on.

As testing programs come of age, encompassing more and more components and strategies for preparing candidates, there is an increasing need to evaluate the differing program strategies for providing adequate support to prospective teachers, the effectiveness of that support, the cost-effectiveness of various strategies, and the implications for upgrading current programs. However, little research has been conducted to date to determine the effectiveness of these materials. This paper describes support systems currently provided for several ongoing programs in Georgia, Oklahoma, Texas and West Virginia and suggested evaluation strategies. Some of these strategies are not new. However, each program has approached these strategies differently. The sheer volume, variety, and popularity of preparation materials and other activities attests to their importance to TCT programs. The clamoring for "more" provides substantial reason for reviewing and evaluating them.

Components of Teacher Certification Testing Program Support Systems

The comprehensiveness of the support systems such as those developed for the Georgia, Oklahoma, Texas and West Virginia programs suggests the commitment and belief by those state educators that such systems have a positive effect on the testing program on the teacher education preparation process, and ultimately on the educational system. There appear to be two major categories of support materials and components: those developed to assist the prospective teacher candidates to prepare for the test and those developed for use by teacher educators to assist examinees and teacher education institutions to effectively use test results. The various components of the support systems are described below.

Preparation of Candidates

A variety of informational and preparatory materials have been developed for teacher certification programs in a number of states (e.g. Georgia, Oklahoma, Texas and West Virginia). States' concerns for providing adequate examinee support for preparing for the test and the teaching profession is illustrated by states, such as these who have made the comprehensive program of support materials and activities an integral part of the testing program.

Support materials were intended to make the program goals and objectives as clear as possible, thereby helping to increase the likelihood that prospective teachers and teacher educators would be well informed about the procedures and content covered by the test. These support materials are described below.

Question and answer brochure. One document that appears to be especially useful during the developmental stages of a program is a question and answer brochure or other short, descriptive, informational flyers. These documents can be concise, one page, self-mailer brochures as was developed for the Oklahoma, Texas, and West Virginia programs, or more detailed documents, like the one prepared for Georgia. At a minimum, the brochure should include the goals of the program, the types of tests that will be used, the requirements for taking the test (who, what, when), the test areas covered, and information about results reporting. The more detailed brochures, (e.g., the Georgia brochure) includes a great deal of additional detail about the test development process, including the avoidance of test bias; registration and test administration procedures; and available examinee support materials. These brochures may be essential during a program's infancy to provide advance program information to teacher candidates, educators, colleges, and the general public, providing accurate information at a time when uncertainty abounds, while lessening potential anxiety about the program.

Publicity campaigns. One of the most effective methods of disseminating information about the program is to develop a publicity campaign. Such campaigns may vary scope from press releases for statewide, local and campus newspapers and newsletters; to radio and television program promotion and interviews; to information-sharing workshops conducted by state-education personnel at colleges across the state. Workshops are especially effective because they provide teacher education personnel with opportunities to gain accurate, first-hand information about the program and also provide a vehicle for having important testing program questions answered directly by state education agency personnel who are involved in testing program management.

Test objectives. For each of the programs in the states noted above, the list of objectives covered by each test was distributed to teacher education institutions for use by faculty and examinees. Test objectives serve many purposes, most importantly:

1) to make examinees aware of the content areas covered by the test;

2) to allow teacher educators to evaluate their curriculum in terms of content area knowledge deemed important to the job of a teacher, prior to the first operational test administration; and

3) to assist teacher educators in reevaluating their teacher preparation programs based on objective-level and subarea-level test results (described in a subsequent section of this paper).

For the programs developed for Oklahoma, Georgia, Texas, and West Virginia test objectives were developed based on state curriculum requirements and materials, and were reviewed and refined by both practicing teachers and teacher educators. Test objectives were further validated by practicing teachers through a content inventory or job analysis survey. Therefore, teachers and teacher educators played an integral part in defining the program content area requirements.

By distributing the objectives early in the program to examinees and teacher educators, each state was able to provide advance notice of the content on which prospective candidates would be assessed while providing for standardization across the state regarding program and testing requirements. Some educators speculate that this process alone contributes to improving the quality and standards of education. Distributing objective information may be one of the most cost-effective activities for the state to conduct in order to provide essential program and test preparational information to both prospective candidates and teacher educators.

The approach used for disseminating test objectives in Texas was particularly interesting because each objective was annotated with a detailed description and examples of the content that would be measured. Since individuals will be evaluated on these areas, it is especially important for examinees and teacher education institutions to be made aware of them.

Registration bulletin. Registration bulletins are typically prepared for each of the state testing programs. These are important and useful documents because of the nature of the information they contain. For some candidates this may be the only, and therefore most important, document they obtain about the testing program. The registration bulletins are comprehensive, detailed documents that address the types of tests included in the program, the test areas covered, and the test development process; state education policies; registration requirements, policies, procedures and forms; test administration policies and procedures; certification requirements; and score reporting procedures. In Texas, a study guide supplement section has also been developed and disseminated.

Announcement flyer. These states previously noted have also found it useful to provide institutions with a one page flyer about the test dates and availability of other informational material. This flyer can be posted in public places on college campuses to alert students to the test schedule and other relevant information about the test date(s), the registration fees, the registration and refund schedule, and where registration bulletins may be obtained.

Study guides. For many programs, a study guide or guides have been developed to assist students in preparing for the test. The purpose of the guides is to provide information useful to the prospective candidate in preparing for the test specifically, as well as for the field. Teacher educators frequently use the guides in assisting students to prepare for the content of the tests and to become familiar with the test materials and administration details (e.g., type of answer sheet used). "Providing study guides for examinees helps attain the goal of strengthening the content knowledge of teacher candidates and is also consistent with the philosophy of providing useful information for remediation" (Weaver, 1986).

The study guides developed for these programs typically include a section that provides background information about the test development process, the nature of the tests, and study and test taking hints. In some programs, (e.g., Texas, West Virginia), copies of the answer sheet and a facsimile of test directions are provided so students can familiarize themselves with these materials in advance of testing. A single guide may be developed to cover some or all the fields in a program, or a separate guide may be developed for each field. The specific content section includes a list of the objectives, sample test items, and an answer key with explanations of the correct responses.

Some states (e.g., Texas), are attempting to further address examinee and faculty requests for more information about test content by providing expanded study guides. These guides may include content outlines based on the educational preparation program objectives and objective descriptions. A set of reference lists are also being developed for the Texas program. Based on input by the state's teacher education professionals, these lists will include bibliographic information for college textbooks, approved public school textbooks, etc., that examinees may wish to review in preparing for the tests. To increase the usefulness of the references provided, the subareas to which each reference is matched can also be designated. Teacher education institution personnel will be able to highlight those references available on campus and to supplement such lists with additional references used at the institution.

The most useful lists would most likely be those that:

1. include texts and other resources easily accessible to students,

2. have been reviewed for match to the objective lists, and perhaps even identified pertinent sections for review; and

3. are frequently (e.g., annually) updated to include the most recently approved and current texts.

Reference lists can be useful not only as preparation tools for students but as a mechanism for helping to identify relevant content material that is not being covered in the program curriculum. As will be noted in a subsequent section of the paper, it would be possible to prepare a chart of the objectives covered by each text (as well as for each course) to identify content that is considered relevant to the field as defined by the objectives.

Study guides can be an important component in the preparation process for both individual candidates and teacher education personnel. During the second year of the Texas program, approximately 200,000 study guides for 63 fields were disseminated to the approximately 24,000 individuals who took the tests. In other words, for every test taken, approximately eight guides were distributed. Feedback from the institutions indicates that teacher education personnel are using guides for curriculum planning to enable them to verify that the cover in their course and program curriculum the content listed by the objectives. In some cases, guides are being distributed to students entering the education programs so that students can monitor and assess their progress in each of the areas covered. The study and test-taking hints sections appear to have been valuable to students studying for classwork and course examinations, not merely for taking the certification test.

States electing to develop and distribute study guides face several questions. For example, should the state fund all preparation and distribution? What are the best distribution methods to ensure equal access and availability of these materials? Does one distribute guides to individual examinees, or to centralized teacher education institution offices? These are difficult questions that need to be addressed up front in deciding how to provide study guides.

Preparation courses and seminars. There exist several private and public vehicles offering preparation to examinees for the assorted testing programs within and across the states. There are options available to prospective examinees and to institutions. Several Texas institutions have themselves held review seminars for examinees preparing to take on the tests. These seminars are directed toward reviewing basic content based on the objectives for the field, as well as reviewing information contained in the study guides. The purpose of such seminars includes the following objectives:

1. to provide a formal opportunity for content review;

2. to reduce test anxiety by familiarizing examinees with the types of materials (e.g., instructions and test questions) they will encounter on the test, thus enabling examinees to concentrate their energies on content preparation; and

3. to assist examinees from various socioeconomic or minority groups in preparing for the tests in order to increase the likelihood of success on the test.

Institutions may also wish to consider implementing peer tutoring programs. In these programs, students who have obtained high test scores could be enlisted to tutor prospective examinees.

Assisting Teacher Education Colleges in the Use of Testing Program Results

All of the materials described above are available to both prospective examinees and teacher education colleges prior to each test administration. However, in order to realize the full benefits of a teacher certification testing program, it is incumbent upon the testing program to provide an extensive array of score reports, test interpretation materials, and additional informational services to teacher education students, faculty, and administrators. Through these post-test feedback mechanisms, the possibility for both student improvement and teacher education program improvement, can be greatly enhanced. It is important to note that while these reports, materials, and services are unique for each individual teacher certification testing program, they share many common characteristics across programs.

Individual examinee reporting. For each program, the examinee receives a score report for each test taken that lists the examinee's scores on the total test and each subarea, as well as the test pass-fail decision. Subarea scores provide examinees with information about their strengths and weaknesses which may guide future test preparation activities. For all four state programs, a basic description of test scores is provided. The reports include detailed information on the reverse side of the score report, describing the type of information included on the report, how the tests are scored, who receives results, how results are used, a description of the scores, and an annotated sample of a score report (see Figures 1 and 2).

Institution reporting. In the Oklahoma, Georgia, Texas and West Virginia programs, institutions receive two categories of results reports: one after each administration and then a cumulative report for the administration year. The actual reports provided for each state differ based on the state's needs. However, each report includes generic information for each test field including:

1. the number of examinees who took the test;
2. the number and percentage of examinees passing at the institution;
3. the number and percentage of examinees failing at the institution;
4. institution total test and subarea scores;

5. the number of examinees statewide;

6. the number and percentage of examinees passing statewide;

7. the number and percentage of examinees failing statewide; and

8. statewide total test and subarea scores.

By reviewing the subarea scores and comparing examinee performance at the institution to that of examinees statewide, institutions may use this information for program planning and modification. Institutions may use subarea scores to identify areas that require increased or decreased emphasis in their preparation programs. If the average subarea score achieved by the institution's students in a field is low, the institution may choose to advise future students to focus on the content of that subarea and give greater instructional emphasis to the objectives in that subarea.

Institutions may also review the test score averages for their institution in light of statewide scores. By doing so at both the total test and subarea levels, the institutions may be better able to identify fields and subareas within fields that warrant increased emphasis in the curriculum.

At the end of the test administration year, institutions receive score report information accumulated for the year. In addition, a report is distributed that lists for each field, the objectives that proved to be most difficult to examinees. As with the other reports, this information is useful for curriculum planning. In Georgia these reports are also provided to examinees to help them focus their studies.

Interpretive guide. In some programs, an interpretive or instructional guide has been developed. This manual is provided to assist faculty and examinees at educational institutions in understanding the score reports generated for the program. The manual provides suggestions for helping faculty identify ways to relate program objectives and results to instructional planning and student preparation.

For example, for the Texas program, the instructional guide provides a sample objective/curriculum matching chart (see Figure 3). The purpose of the chart is to provide a vehicle for identifying the match between test objectives and program curriculum for each field. Objectives that are determined not to be covered in specific course curricula can be identified and incorporated as appropriate. Matching can be done at the broader course level or more specific course curriculum level. As mentioned earlier, a match of course textbooks and other course materials can be made to the objectives and to the curriculum for a comprehensive inventory of the program at the institution. This tool has been widely used in Texas curriculum planning.

FIGURE 1

Sample A: "PASS" LETTER

EXCET

EXAMINATION FOR THE CERTIFICATION OF EDUCATORS IN TEXAS

INDIVIDUAL EXAMINEE REPORT

PAT A BAILEY
301 FAIRVIEW ST
HOUSTON TX 77027

Examinee Number: 7046219

Report Date: July 19, 1986

Dear Examinee:

You have passed the Elementary Comprehensive test that you took on May 24, 1986 . Your score on the test was 72. The passing score is 70.

Questions on the test you took are grouped into primary content subareas corresponding to the list of objectives for your field. Your performance in each subarea is presented in the table below. Your total test performance is also shown. Because the number of test items in each subarea is not equal, the average of the subarea scores may not equal the total test score. See the back of this score report for further explanation of how to interpret your scores.

# OF ITEMS	SUBAREA NAME	YOUR SCORE	PERFORMANCE GRAPH
....	Language Arts	76	
....	Mathematics	70	
..	Science	100	
....	Social Science	57	
..	Fine Arts	76	
.	Health and Physical Education	66	
	TOTAL TEST	72	

0 70 100

. = 11 to 20 items .. = 21 to 30 items
... = 31 to 40 items .... = 41 or more items

If you do not currently hold a Texas teacher certificate, you must apply through the Certificate Office at your college or university. Applicants holding out-of-state certificates should obtain an application from the Texas Education Agency, Teacher Certification Division. If you currently hold a Texas teacher certificate in one field, and wish to add another certificate or endorsement, you must have a deficiency plan from a Texas college or university; upon completion of the deficiencies, you must file an application through that college or university. All applicants for a Texas teacher certificate must complete Form TCER-009. Certification is granted when all requirements have been met and the appropriate documents filed with the university and/or the Texas Education Agency. Direct any questions concerning certification to the Texas Education Agency, Teacher Certification Division, Austin TX 78701, (512) 463-8976.

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Sample B: "DID NOT PASS" LETTER

EXCET

EXAMINATION FOR THE CERTIFICATION OF EDUCATORS IN TEXAS

INDIVIDUAL EXAMINEE REPORT

PAT A BAILEY
301 FAIRVIEW ST
HOUSTON TX 77027

Examinee Number: 7046219

Report Date: July 19, 1986

Dear Examinee:

You did not pass the Elementary Comprehensive test that you took on May 24, 1986 . Your score on the test was 68. The passing score is 70.

Questions on the test you took are grouped into primary content subareas corresponding to the list of objectives for your field. Your performance in each subarea is presented in the table below. Your total test performance is also shown. Because the number of test items in each subarea is not equal, the average of the subarea scores may not equal the total test score. See the back of this score report for further explanation of how to interpret your scores.

# OF ITEMS	SUBAREA NAME	YOUR SCORE	PERFORMANCE GRAPH
....	Language Arts	66	
....	Mathematics	70	
..	Science	100	
....	Social Science	57	
..	Fine Arts	76	
.	Health and Physical Education	66	
	TOTAL TEST	68	

0 70 100

. = 11 to 20 items .. = 21 to 30 items
... = 31 to 40 items .... = 41 or more items

You may retake the test as many times as you wish. The next test will be given on October 11, 1986 . The deadline for registration is September 6, 1986. Registration bulletins and study guides are available from Departments of Education at colleges and universities throughout Texas and from the Texas Education Agency, Publications Office, 1701 North Congress Ave., Austin, TX 78701. Consult the study guide for this field for further information on how to prepare for the test. Contact your college advisor for recommended resources to consult in preparing for the test. Certification is granted only when all requirements have been met.

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FIGURE 2

HOW TO READ YOUR INDIVIDUAL EXAMINEE REPORT

Information provided on the Individual Examinee Report. Your score report indicates whether or not you have passed the test, how you performed on the test as a whole, and how you performed on each major content subarea of the test. Pass/fail status is based on your total test performance in relation to the passing score. You should receive a separate score report for each test you took.

The results of this test have been forwarded to the Texas Education Agency and to the recommending Texas institution, unless you provided written notification not to release your score to that institution. You should keep this score report for your own records.

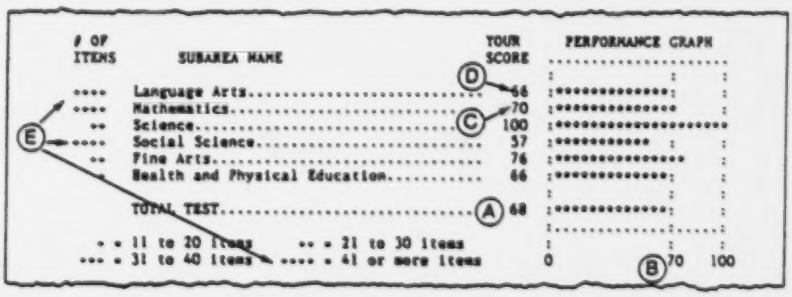
How the tests are scored. Your performance on the test is evaluated against an established level of competence represented by a minimum passing score. The minimum passing scores for the ExCET were established by the Texas State Board of Education based on recommendations from panels of Texas public school educators and college and university educators. The passing score is designed to reflect the minimum level of content knowledge required for effective performance in Texas schools.

All results are reported as scaled scores. The scaled score is a conversion of the number of questions answered correctly to a score in a range of 0 to 100, with a score of 70 representing the total passing score. The scaled score does not represent the percentage of questions answered correctly. A total test scaled score of 70 is required to pass each test.

Description of subarea scores. The score reports also provide subarea scores to help you assess your areas of strength and weakness to prepare to retake the test or for further study. Subarea scores are presented on the same scale as the total test score so that a score at or above 70 on a given subarea indicates mastery of the subarea.

Pass/fail status is based on the number of correct responses for the whole test, not for each subarea. Because raw scores on the subareas are converted to scaled scores, the average of the subarea scores may not equal the overall score. Subarea scores are reported solely to help examinees assess their performance on the major portions of the test. Note that subareas may contain different numbers of questions; therefore, candidates who fail and retake the tests may receive a higher (or lower) score in one subarea without substantially changing their total test scores. The range of items in each subarea on the test is indicated on the report to the left of the subarea title. The set of objectives matched to each subarea is listed in Section II of the Study Guide for your field. You will need to perform reasonably well on each subarea in order to pass the test. However, if you are studying to retake a test, you will be more likely to improve your test score if you concentrate your efforts on those subareas with the greatest numbers of items on which you performed most poorly.

Reading your report: a sample. A sample of the section of the score report that lists the total test and subarea scores for an examinee named Pat is provided below. You will find a similar section on the front side of this report.



According to the above sample, Pat did not pass the test. Pat scored 68 (A) on the total test and did not meet the passing score of 70 (B). Pat performed well on three subareas: Mathematics, with a score of 70 (C); Science, with a score of 100; and Fine Arts, with a score of 76. However, Pat did not perform well on Language Arts (subarea score of 66) (D), Social Science (subarea score of 57), and Health and Physical Education (subarea score of 66). In studying to retake the test, Pat will probably concentrate on studying for the Language Arts, Social Science, and Health and Physical Education subareas, paying particular attention to the Language Arts and Social Science subareas. These two subareas have been given a great deal of emphasis in this field as indicated by the number of items included on the test; more than 41 test questions are included on the test for each of these subareas (E).

FIGURE 3
Sample Objective/Curriculum Matching Chart for Field 23: Biology

COURSES	OBJECTIVES																	
	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018
Prerequisite skill or knowledge																		
BIO 100 Intro Bio	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		
BIO 101 Sociobiology	✓		✓			✓									✓			
BIO 102 Botany										✓						✓	✓	✓
BIO 103 Zoology																✓		
BIO 104 Genetics									✓			✓	✓					
BIO 105 Developmental Bio														✓				
BIO 106 Ecology																		
BIO 130 Cell Structure and Function								✓	✓	✓								
BIO 205 Biochemistry											✓	✓						
BIO 210 Evolutionary Bio															✓			
BIO 230 Immunology													✓	✓		✓		
NOTES		TBA																

TBA = To Be Assigned

Instructional Seminars. In an effort to further strengthen support systems for teacher education colleges, instructional seminars could be developed for teacher certification testing programs. Test publishers could work with state education departments and colleges to develop the most appropriate format for these seminars. One possibility would be to conduct one-day seminars with college faculty and administrators, with formal presentations of key testing program issues in the morning, followed by a series of smaller group workshops in the afternoon. Among the topics that might be included in the seminars are the following:

1. impact of the testing program on examinees;

2. preparing examinees for the tests;

3. interpreting individual and institutional score reports;

4. incorporating test objectives in college courses;

5. remediation strategies for helping examinees who fail one or more tests;

6. using the tests to diagnose student strengths and weaknesses; and

7. developing research designs and procedures for studying the effect of the testing program on prospective teachers.

The instructional seminars could be custom-tailored to the needs of each college in a state, in order to ensure that teacher preparation programs can use the seminars to most effectively enhance their programs and improve the quality of teacher training.

Teacher Education Institutional Research and Evaluation of Support System Effectiveness

It may be desirable for university teacher education institutions to develop systematic studies of the impact of teacher certification testing program support systems. The task of evaluating these different support systems may not be an easy one. One of the primary outcome measures in determining the effectiveness of support systems is examinee pass or fail status on a certification test. It is difficult to isolate the impact of a single support system, since its impact is likely to be confounded by the effect of other support systems and a host of individual difference variables (e.g., college achievement, rigor of examinees curriculum, quality of college curriculum, motivation to enter the teacher profession). Research methodology is limited further by the inability to randomly assign examinees to support or to nonsupport treatment groups or to control the amount of time examinees use a specific support system.

Despite these research limitations, there are many questions that need to be answered in order to evaluate the effectiveness of support systems, specifically:

1. Which support systems do examinees prefer in preparing for a certification test?

2. How much time do examinees spend utilizing specific test preparation support systems?

3. To what extent do examinees use test preparatory support systems in groups, as opposed to individual settings?

4. Are there differences in how examinees make use of the diagnostic information provided to them in score reports?

5. To what extent do colleges encourage the use of support systems by examinees and by faculty?

6. What is cost-benefit of individual support system strategies?

7. Which support systems are most valuable in assisting minority examinees to attain higher rates of success?

There are some potentially useful strategies that could be employed in obtaining the answers to these and other support system evaluation questions, so that these systems can be refined and modified to increase their efficacy.

Post-test questionnaire. One source of research data in evaluating the effectiveness of support systems would be to employ a post-test examinee questionnaire. Upon completing their teacher certification test(s), examinees would be requested to complete a questionnaire that would seek to determine how many different support systems they had used in preparing for their test, the amount of time for which they used each support system, and their estimates of the degree to which each support system helped to prepare them for the test. Analyses could be done to examine the relationship between use of support systems and actual test performance. A post-test questionnaire would provide a rich source of data for evaluating support systems and provide state-level decision makers and teacher education colleges with information about the most appropriate allocation of funds for support system activities.

Pre-test questionnaire for repeat examinees. A second source of research data is a questionnaire administered to examinees who had not passed a test(s) on their first attempt. This questionnaire could be administered prior to an examinee's second attempt at the previously failed test(s). While it may be difficult to obtain a large number of volunteers for this task, the research data obtained would be particularly valuable in studying the use and effect of post-test support systems. If a major goal of teacher certification testing is to help examinees remediate educational deficiencies, this particular questionnaire could obtain data on the support systems selected by repeat examinees, the relative amount of time spent using the support system, the availability of the support system, and examinee perception of support system efficacy in preparing for a repeat test administration. It would be valuable to study the relationship between examinee questionnaire responses and performance on the repeat test administration.

Teacher education use of support systems and examinee performance. A third source of research data would involve a quantitative and qualitative study of the use of various direct and indirect support systems at each teacher education institution and their relationship to a variety of examinee performance outcomes. Each teacher education institution could gather data on the types of direct and indirect support systems that it used, the organization and management of each support system, the extent of faculty and staff involvement in each support system, and the extent of teacher education student participation in institutionally directed support activities.

Some possible types of data gathered from teacher education institutions could include the following:

1. the degree to which test objectives are incorporated into the teacher education preparation curriculum and in related non-teacher education courses with a particular university,

2. the degree to which teacher education faculty and staff promulgate the certification testing program by distributing announcement flyers and study guides, or discussing the program with students and advises,

3. the amount of time and the methods used by teacher education faculty and staff in reviewing institution score report data individually or in group review with colleagues, and

4. the amount of time and the methods used by teacher education faculty and staff in reviewing individual examinee score reports with students.

Once these data are provided by the teacher education institutions, the relationship of this data to examinee performance outcomes could be examined. By studying the relationship of institutional support systems to examinee performance, institutions could learn several things. First, they could determine the relative cost-effectiveness of various support systems. Second, they could shift institutional resources to those support systems that were most instrumental in improving examinee outcomes. Among the outcomes that could be valuable for each institution to study would be the following:

1. percentage and number of examinees passing each test on their first attempt,

2. percentage and number of examinees passing each test on their second and subsequent attempts,

3. average test score gains for repeat examinees for each test, and

4. number of examinees who leave a teacher education program of study following one or more unsuccessful attempts in passing a certification test(s).

A variety of research and evaluation strategies for examining the effects of support systems on teacher certification testing programs have been proposed. States that have teacher certification testing programs may want to consider developing plans to evaluate current and proposed support systems. Evaluation of these systems may help to ensure that these systems serve to improve examinee performance on the certification tests and, ultimately, improve the quality of teacher preparation.

Summary

A teacher certification testing program involves much more than the tests themselves assess. The program contains important support systems. With a support system for the test, teacher education programs can better prepare prospective teachers for the test and improve their own use of the results of the tests. To the extent that the support system for the testing program is complete and inclusive, individuals will be more effectively prepared to enter the teaching force, thereby improving the quality of education. The support system developed for the testing programs described in this paper serve as a model for such support systems.

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